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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,605	07/11/2001	Yoshiyuki Okada	826.1735	7617

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EXAMINER

SONG, JASMINE

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 05/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,605

Applicant(s)

OKADA, YOSHIYUKI

Examiner

Jasmine Song

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 12-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6-11 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☒ Claim(s) 12-27 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 and 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Detailed Action

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 08/28/2001 and 09/13/2001 have been considered by the examiner.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. Figures 2-10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Election/Restrictions

5. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 1-11, drawn to an access control method or apparatus for processing a plurality of access requests to a disk storage medium based on the disk scheduling algorithm, classified in class 711, subclass 158.

Group II. Claims 12-27, drawn to a storage medium have a plurality of zones and transfer speeds of the zones can be leveled, classified in class 711, subclass 170.

6. The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, each of the invention in Group I and II has separate utility because the invention of group I has separate utility in a system in which the controlling of recording or accessing data in a storage medium is not based on a ZCAV system. See MPEP § 806.05(d).

7. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and recognized divergent subject matter, and because the divergent searches required for the different groups, restriction for examination purposes as indicated is proper.

8. During a telephone conversation with Randy Beckers (Reg. No.) on 03/24/2003 to request an oral election to the above restriction requirement, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-11.

Affirmation of this election must be made by applicant in replying to this Office action.

Claims 12-27 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(h).

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-2,8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamato et al., U.S. Patent 5944792.

Regarding claims 1,8 and 10, Yamato et al. teach that an access control apparatus (Fig.10, element 70) which processes a plurality of access requests (Fig.10, the read requests from the client 60 and col.15, lines 20-22) to a storage medium (Fig.10, element 10), comprising:

a scheduling unit (Fig.10, element 73) determining a deadline of an accessing process (col.16, lines 53-58) depending on a change of a data transfer rate (col.14, lines 60-67 and col.17, lines 19-22), and setting an execution schedule for the plurality of access requests in order from a process having an earliest deadline (col.8, lines 44-48 and col.17, lines 52-57); and

a control unit (Fig.10, element 20, col.8, lines 6-9, lines 35-48 and col.17, lines 50-52) controlling execution of the access requests according to the execution schedule (col.17, lines 54-57).

Regarding claim 2, Yamato teaches that said scheduling unit determines a deadline of a reading process according to information about a deadline of writing read data in response to a request to read data from the storage medium (col.15, lines 26-31 and col.16, lines 38-48).

12. Claims 6-7, 9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamel et al., U.S. Patent 6263411 B1.

Regarding claims 6,9 and 11, Kamel et al. teach that an access control apparatus which processes a plurality of access requests to a disk type storage medium, comprising:

a determination unit (Fig.1, element 12, MSFS) determining a write area (Fig.2, element 28, memory buffer pool) such that a plurality of write positions (Fig.2, element 32) can be close to each other (Fig.5A or Fig.5B, all the write requests are close each other and col.10, lines 33-39) in response to a plurality of write requests to write data to the storage medium (col.9, lines 41-45 and col.10, lines 43-45); and

a control unit (Fig.5B, element 114) controlling a process of sequentially writing write data to the write area specified by each write request (col.7, lines 41-42 and col.8, lines 7-13).

Regarding claim 7, Kamel teaches that wherein said determination unit determines the write area (Fig.2, element 28, memory buffer pool) based on at least one of a number of the write requests and a total transfer rate of the plurality of write requests (col.6, lines 55 to col.7, lines 17).

Allowable Subject Matter

13. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4-5 are objected because they are depended on the claim 3 and further incorporated with more subject matters.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tomita., U.S. Patent 6,233,648 B1 teaches that a disk storage system and data update method used therefor.

Ohmori., U.S. Patent 5991106 teaches that AGC circuit or disk storage apparatus.

Chen., U.S. Patent 5787482 teaches that a disk control mechanism for controlling the operations of a movable arm disk drive.

Aref et al., U.S. Patent 6023720 teaches that a disk scheduling system supports the processing of simultaneous storage device read and write requests in a video server environment.

Ozden et al., U.S. Patent 5761692 teaches that a method and apparatus of retrieving continuous and non-continuous media data from a file system.

15. When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. 1.111 (c).

16. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasmine Song whose telephone number is 703-305-7701. The examiner can normally be reached on 8:00-4:30.

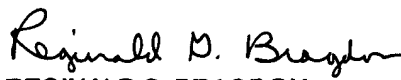
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 703-308-1756. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Jasmine Song
Patent Examiner



April 24, 2003


REGINALD G. BRAGDON
PRIMARY EXAMINER

IMPORTANT NOTICE

The Examiner's art unit number has changed from 2187 to 2188 due to the recent realignment of workgroup 2180. Please use art unit 2188 on all correspondence related to this case.
